

ABSTRACT OF THE DISCLOSURE

A piezoelectric element structure comprises a supporting substrate, and a piezoelectric film supported on the supporting substrate, in which the piezoelectric film contains a first layer, and a second layer having zirconium, each provided with perovskite structure, and formed to be in contact with each other or laminated through an intermediate layer, and the temperature is set at 500°C or more at the time of thin film formation so as to provide the piezoelectric film, and a quick cooling is given from the thin film formation temperature at least to 450°C with a cooling speed of 30°C/min or more for the formation thereof. The piezoelectric film thus formed is in a small thickness as compared with the conventional piezoelectric film, but presents a large piezoelectric constant, hence making it possible to perform efficient microprocessing thereof reliably.